requirements to support District activities such as timber sale planning, resource management activity plans, watershed assessments, catchment assessments, etc. Outputs include exhibits, statistics, and tables of information used to support the various activities mentioned. GIS produced numerous other intermediate evaluation products used in the decision making processes, assisting managers and subject matter experts to come to final decisions designed to meet the Bureau's mission.

Several Arc Macro Language (AML) tools were developed and implemented to speed up the collection and analysis processes. Several people received special training in the use of newly developed applications designed to make sharing data with other districts and agencies possible as a seamless environment. Several new program tools were added to the GIS tool box this past year. A major upgrade to our principle program, ArcInfo was and is being evaluated. Another program, World Construction Set is being used to display our resources and potential activities in artificial "near photo realistic" renderings. A new, to us, program language, visual basic, is also being looked at and evaluated.

More on the New Carissa

The District continues to play a key role in the Natural Resource Damage Assessment (NRDA) for the *New Carissa*. On February 4, 1999, the *New Carissa*, a 640 foot wood-chip freighter, went aground on the public beaches of the North Spit of Coos Bay with 400,000 gallons of bunker and other fuel oil on board. Subsequently, the vessel began leaking oil, an attempt to burn the remaining oil was made and subsequently the vessel split in two, and additional oil was released. The bow section was refloated and towed offshore, only to break its tow and re-ground 65 miles further north along the Oregon coast at Waldport where additional oil was released. The bow section was again refloated, towed to sea, and sunk in deep water. The stern section remains stranded at the original grounding site on Coos Bay's North Spit.

There were many natural resources of concern in the area affected by the spills, including birds, marine mammals, fish, shellfish, outer beaches and rocky shores, and the estuaries from Coos Bay to Yaquina Bay. Most directly affecting the Coos Bay District was the potential impact to the Western Snowy Plover, a threatened species which nests on BLM managed lands on the North Spit and the lost public use on some of those same public lands.

Under the Oil Pollution Act of 1990 (enacted following the Exxon Valdez spill), certain federal, state and tribal natural resource Trustees can charge the party responsible for the spill (Responsible Party) costs of assessing the damages from an oil spill to resources they manage and any restoration actions necessary to return those resources to a pre-spill condition. Because the *New Carissa* ran aground adjacent to lands managed by the Coos Bay District and some of the Bureau's resources were potentially damaged by the grounding and spill, the Oregon/Washington State Director was appointed as the Authorized Officer for the Department of Interior, and District personnel have been working with the other natural resource designated Trustees in the case to determine what damages to resources may have occurred. The Coos Bay District has assumed the administrative lead for the case and has been working closely with the U. S. Fish and

Wildlife Service, the Office of the Solicitor, and the other Trustee agencies (Forest Service, National Oceanic and Atmospheric Administration, Oregon Department of Environmental Quality, and Oregon Department of Fish and Wildlife), and tribes (the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians, the Coquille Tribe of Oregon, and the Confederated Tribes of the Siletz, Oregon). This is the first time that the BLM has assumed the lead role in the NRDA process for the Department, as well as the first time as the lead Trustee for all others.

During the past year, the Trustees have focused on determining if there have been any injuries to the resources they manage.

Western Snowy Plover: Trustees contracted with The Nature Conservancy to conduct a year long study on the Western Snowy Plover. At least 45 of the species (more than one-half of the typical Oregon winter population) were oiled during the incident; 17 of those were captured and cleaned by a special bird rehabilitation team. The study was completed and a report "Impact assessment of oil spilled from the New Carissa on the Western Snowy Plover along the Oregon Coast" (Stern, M.A. D.J. Lauten, K.A. Castelein, K.J. Popper and J.A. Fukuda. 2000, Unpublished report by the Oregon Natural Heritage Program and The Nature Conservancy to TMM Co., LTD; Coos Bay District Bureau of Land Management; Oregon Dept. Fish and Wildlife, Dunes National Recreation Area; U.S. Fish and Wildlife Service. 32pp).

Overall, at the population level, the report indicated that both the abundance and productivity of breeding plovers along the Oregon coast did not appear to be overtly affected by this incident. There may have been impacts to specific sites and specific individuals however.

Seabirds, Shorebirds, and Bald Eagles. More than 1,300 birds were collected during the early stages of the incident along the beaches near Coos Bay and Waldport. Trustees consequently funded a study and have received a draft report entitled "Seabird Mortality resulting from the M/V New Carissa Oil Spill Incident, February and March 1999". (Ford, Glenn R., Gina K. Himes Boor, and Jennifer Caylor Ward which indicates the total number of birds estimated to have been killed by the incident. Results of the draft study will be released to the public following final review by the Trustees.

Lost Recreation Use. Trustees prepared a report entitled "New Carissa Recreation Loss, Preassessment Report" which estimated that there were 25,060 to 26,060 lost trips and 1000 diminished trips as a result of the New Carissa spill.

In addition to the injury assessment, it has been the BLM's role to act as administrative trustee for all the other trustees. This has involved a close tracking of all trustee and contractor costs and presentation of these formal bills to both the Responsible Party and the National Pollution Fund Center, administered by the U.S. Coast Guard.

The next phase of the NRDA process is the Restoration phase, where the Trustees plan measures to rehabilitate resources damaged by the spill.



The New Carissa September 28, 1999



The New Carissa December 2000